



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
MACK MR688S 140
Component
Diesel Engine
Fluid
DURALENE Dura-Max 15W40 (52 QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0016300	DC0027566	DC0016277
Sample Date		Client Info		13 Feb 2024	30 Mar 2023	20 Oct 2022
Machine Age	hrs	Client Info		0	30321	29792
Oil Age	hrs	Client Info		0	30321	500
Filter Age	hrs	Client Info		0	30321	500
Oil Changed		Client Info		N/A	Changed	N/A
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	4	11	13
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	<1	1
Lead	ppm	ASTM D5185m	>40	<1	<1	4
Copper	ppm	ASTM D5185m	>330	<1	2	3
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

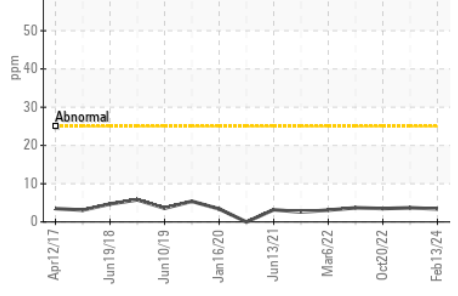
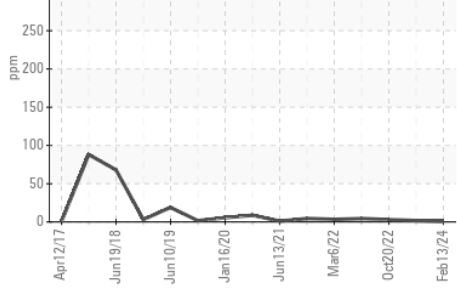
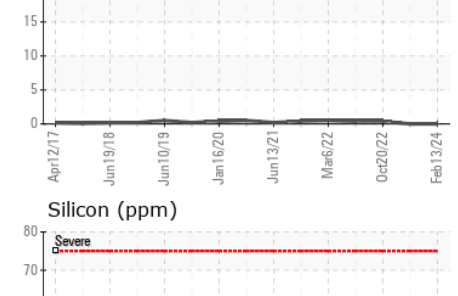
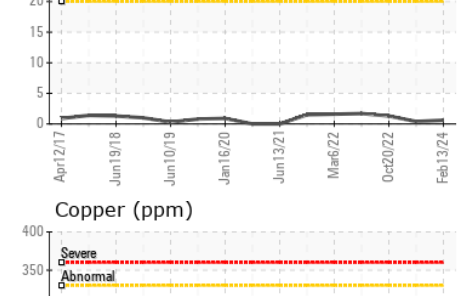
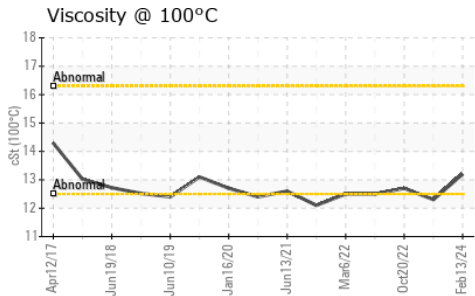
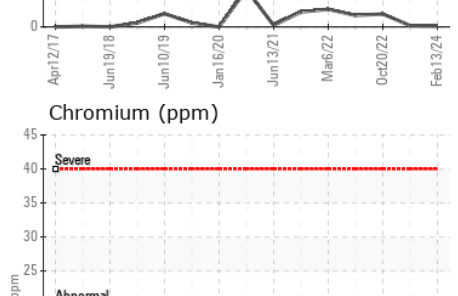
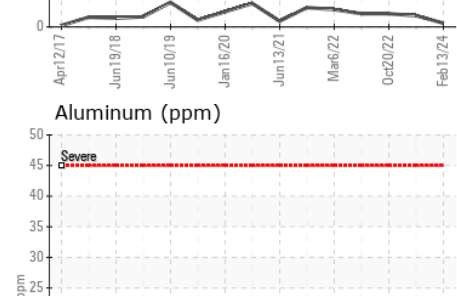
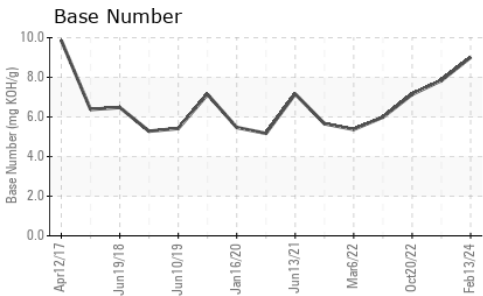
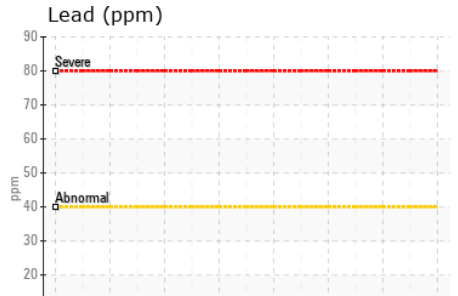
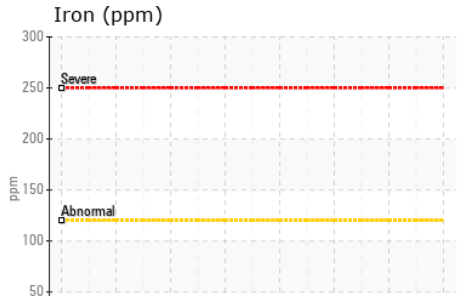
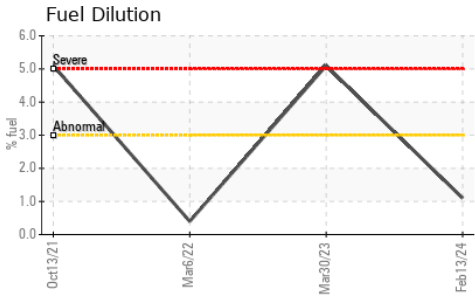
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	3	4	4
Potassium	ppm	ASTM D5185m	>20	0	<1	<1
Fuel	%	ASTM D3524	>3.0	1.1	▲ 5.1	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.1	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	5.4	7.6	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.4	18.8	21.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	1	1
Boron	ppm	ASTM D5185m		4	2	4
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	3	4
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		63	57	56
Calcium	ppm	ASTM D5185m		2024	2309	2174
Phosphorus	ppm	ASTM D5185m		804	856	811
Zinc	ppm	ASTM D5185m		1043	1052	1060
Sulfur	ppm	ASTM D5185m		3441	3921	4000
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.2	11.4	13.1
Base Number (BN)	mg KOH/g	ASTM D2896		9.01	7.84	7.14
Visc @ 100°C	cSt	ASTM D445		13.2	▲ 12.3	12.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0016300 **Received** : 14 Feb 2024
Lab Number : 06089023 **Tested** : 15 Feb 2024
Unique Number : 10876468 **Diagnosed** : 15 Feb 2024 - Wes Davis
Test Package : MOB 2 (Additional Tests: PercentFuel)

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Certificate L2367
 To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)